

REMARKS/ARGUMENTS

In response to the Office Action dated December 16, 2004, Applicant respectfully requests the Office to enter the following amendments and consider the following remarks. Claims 7-13 and 28-47 are pending in this application. With this amendment, claims 1-6 and 14-26 have been canceled without prejudice or disclaimer. Claim 7 has been amended to improve readability and to more precisely recite aspects of one embodiment of Applicant's invention. Representative support for the amendment can be found, for example, at page 31, line 1 through page 32, line 6 of the specification. Claim 9 has been amended to correct a typographical error.

In the Office Action, the Examiner: (i) requested Applicant to show support for a claim amendment made in Applicant's Amendment of July 14, 2004; (ii) rejected claims 7, 10-11, and 13 under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 6,047,242 to Benson ("Benson"); and (iii) rejected claims 1-6, 8, 9, 12 and 14-26 under 35 U.S.C. § 103(a) as being unpatentable over Benson in view of U.S. Patent No. 6,009,543 to Shavit ("Shavit") and/or U.S. Patent No. 5,745,678 to Herzberg ("Herzberg").

Support for Previous Amendments

The Examiner asked Applicant to show support in the specification for the amendments made to claim 7 in Applicant's Amendment of July 14, 2004. Office Action, page 2, paragraph 2.1.

Applicant respectfully responds that representative support can be found, for example, at page 10, line 25 through page 11, line 17; page 30, line 7 through page 31, line 22; page 35, line 18 through page 38, line 6; and in FIGS. 15, 22A, and 22B.

35 U.S.C. § 102(e) Rejections

Claims 7, 10-11, and 13 were rejected under 35 U.S.C. § 102(e) as being anticipated by Benson. See Office Action at page 4, paragraph 3.1. Claim 7, as amended, recites a trusted element for use with a computer system that includes an insecure execution space for executing an application. The trusted element selects a portion of the application and issues a challenge that requests a response from the insecure execution space, the response providing a computation of at least one value based on the selected portion of the application.

First, Applicant thanks the Examiner for identifying an error in Applicant's previous response; namely, that Benson discloses an embodiment in which the license server and the protected software are located on the same computer system.

Applicant respectfully submits, however, that Benson does not teach or suggest a trusted element as recited in Applicant's claim 7. Unlike claim 7, in which a challenge is generated based on a predetermined portion of an application, Benson describes a fundamentally different challenge/response mechanism that is based on proof of possession of hidden keying material. This keying material is not a portion of the application, much less a portion of the application's code as recited in Applicant's amended claim 7. Instead, Benson's keying material appears to reside in a specially created file that bears no direct relationship to the code of the application itself. In contrast, the trusted element recited in Applicant's claim 7 makes use of portions of the

application's code, thus providing a mechanism for ensuring that the application has not been tampered with. In sum, Benson's disclosure addresses a different problem than Applicant's claim 7. Whereas Benson is primarily concerned with preventing unauthorized execution of a piece of software (see, e.g., Benson at column 1, lines 6-10), and thus requires demonstration of possession of authorization information (i.e., keying material) before execution is allowed, Applicant's claim 7 recites a mechanism for detecting modification of a piece of software, and involves checking a portion of the application itself to see if it has been modified.

As per claim 8, the Examiner indicates that Benson "further discloses the random selection of at least one predetermined portion of a [sic: piece of] software". See Office Action at page 2, paragraph 2.1 (citing Benson, claims 1-3 and 17-19, and column 9, lines 25-35). Applicant respectfully disagrees. Instead, the cited portions of Benson simply disclose the calculation of a random number for use in a challenge/response process. See, e.g., Benson at column 14, lines 36-39 ("the nonce generator builds a random number, using a random number generator ... consist[ing] of two process threads"). Benson indicates that one way of generating such a random number is by timing disk accesses. See, e.g., Benson at column 9, lines 25-35; column 15, lines 15-19.

Applicant respectfully submits that the generation of a random number is not the same as the random selection of a portion of an application to check against a credential, nor is a random number the same as a randomly selected portion of an application. A random number is just that—a number—whereas a randomly selected portion of an application is part of the application itself that can then be checked for

unauthorized modification. In sum, Applicant respectfully submits that Benson does not disclose the random selection of at least one predetermined portion of an application, much less such a random selection for the use recited in Applicant's claim 8.

For at least these reasons, Applicant respectfully submits that claims 7 and 8 are not anticipated by Benson. Claims 9-13 are dependent on claim 7, and are thus allowable for at least the reasons set forth above in connection with claim 7.

35 U.S.C. § 103(a) Rejections

The Examiner rejected claims 1-6, 8, 9, 12 and 14-26 under 35 U.S.C. § 103(a) as being unpatentable over Benson in view of Shavit and/or Herzberg.

With this Amendment, Applicant has canceled claims 1-6 and 14-26 without prejudice or disclaimer. Thus, Applicant respectfully submits that the rejection of these claims is now moot. Claim 12 is dependent from claim 7, and is thus allowable for at least the reasons set forth above in connection with claim 7.

New Claims 28-47

Claims 28-47 have been added to round out the scope of protection for Applicant's invention. Representative support for claims 28-47 can be found at page 30, line 9 through page 38, line 6 of the specification and in the related drawings. Applicant respectfully submits that claims 28-47 are allowable over Benson, Shavit, and Herzberg. For example, Applicant respectfully submits that the cited references do not disclose the use of a trusted element as recited in claims 28-47.

CONCLUSION


In view of the foregoing remarks, Applicants submit that this claimed invention is allowable over the references cited against this application. Applicants therefore request the entry of this Amendment, reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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